

January 30, 2015

CONFIDENTIAL

Mr. Dave Bergstrom  
Executive Director  
Minnesota State Retirement System  
60 Empire Drive, Suite 300  
St. Paul, MN 55103

**Re: Projection of Contributions and Funding Status – Correctional Fund**

Dear Dave:

Attached are 30-year projections of estimated funded status, required contributions, and statutory contributions under three asset return scenarios for the Correctional Employees Retirement Fund (CERF). Unless noted otherwise, the estimates are based on participant data, assumptions, methods, and plan provisions as detailed in the Correctional Employees Retirement Fund Actuarial Valuation Report for funding purposes as of July 1, 2014.

As required by the State of Minnesota Standards for Actuarial Work, the projections reflect three asset return scenarios. The statutory investment return assumption is a select and ultimate approach with rates of 8.0% for the 5-year period ending June 30, 2017 and 8.5% thereafter. The scenarios assume future investment returns of 1.5% more than the assumed rate, the assumed rate, and 1.5% less than the assumed rate. Note that we believe the 10% rate of return assumption is outside of the range of reasonable expected returns for this plan.

Note that as funding ratios decline, as they are expected to in some of the investment return scenarios shown in this letter, it will be increasingly difficult for the plan to attain the assumed investment return. Each year, a larger proportion of assets is paid out in benefits, and less capital is available to invest.

The estimates are based on the market value of assets with no smoothing of investment gains or losses. In all scenarios, the valuation interest rate used to discount liabilities was the single effective interest rate used in the July 1, 2014 valuation of 8.41%, which produces a similar liability stream as trending to a liability that reflects the expiration of the 5-year select period on June 30, 2017.

Payroll is assumed to increase approximately 3.75% a year over the long-term, consistent with the valuation assumption for total payroll growth.

The projection is an open group projection; meaning, active members projected to retire or otherwise terminate in the future are replaced with new active members so that the total active membership of the fund remains at 4,504 members. The profile of these new members is the same as new members hired between July 1, 2010 and July 1, 2013:

- Average age at hire is 33.4
- Average salary at hire is \$40,200
- Approximately 43% female, 57% male

If actuarial accrued liability exceeds assets, the unfunded actuarial accrued liability is amortized through June 30, 2038 per Minnesota Statute 356.215, Subdivision 11. As directed by MSRS, the statutory amortization date is assumed to be changed to June 30, 2068 once the current period expires in 2038. Per Minnesota Statute 356.215, Subdivision 11 (l), a negative unfunded actuarial accrued liability (i.e., when assets exceed liability) is amortized over a rolling 30-year period.

Based on MSRS' direction, we have shown projection results with and without the contribution stabilizer defined in Minnesota Statute 352.045, summarized in the attached Exhibit A.

Based on the operations of the stabilizer, the projected highest annual statutory contribution rate is:

<b>Assumed Investment Return</b>	<b>Maximum Statutory Contribution (percent of pay)</b>
6.5%/7.0%	44.45%
8.0%/8.5%	23.83%
9.5%/10.0%	23.20%

In the least optimistic scenario, the maximum contribution rate attained in the 30-year projection period is significantly higher than the current rate of 21.95%.

### **Post-retirement Benefit Increases**

A very significant assumption affecting the projected estimates is the expectation of annual increases in the benefits being paid to retirees and beneficiaries. If the plan reaches a funding ratio of 90% (based on a 2.5% post-retirement benefit increase assumption) on a market value of assets basis for two consecutive years in the future, post-retirement increases will revert to the 2.5% level.

For the actuarial valuation as of July 1, 2014, an actuarial projection was performed to estimate when this plan is expected to attain the threshold required to pay a 2.5% post-retirement benefit increase. The projection indicated that if all assumptions were met, the threshold is expected to be attained in the year 2033, and that the plan would begin paying 2.5% benefit increase on January 1, 2034. This assumption is reflected in our valuation calculations and in the 8.5% ultimate rate of return projection scenarios (with and without contribution stabilizer).

Under the 10% ultimate rate of return scenario, the funded status of the plan is expected to improve. As the plan experiences greater than expected investment return each year, the assumed 2.5% benefit increase date of January 1, 2034 is accelerated. We performed a projection to estimate when the plan is expected to attain the threshold required to pay a 2.5% post-retirement benefit increase if future investment returns are 9.5% through June 30, 2017 and 10.0% thereafter. This projection indicated the plan would begin paying a 2.5% benefit increase on January 1, 2024 under this investment return scenario. To approximate the acceleration of the assumed 2.5% benefit increase date from 2034 to 2024, we assumed the accrued liability and normal cost would increase a proportionate amount between 2014 and 2024. The same benefit increase assumptions were made for the 10% ultimate rate of return with contribution stabilizer scenario.

Under the 7% ultimate rate of return scenario, the funded status of the plan is expected to deteriorate. As the plan experiences lower than expected investment returns each year, the assumed 2.5% benefit increase date becomes later each year until it is no longer projected to be attained. We assumed for purposes of this projection that this transition from the current assumption that the benefit increase will change from 2.0% to 2.5% on January 1, 2034 to an assumption that the benefit increase will remain at 2.0% for all years would occur by July 1, 2017. The same benefit increase assumptions were made for the 7% ultimate rate of return contribution stabilizer scenario.

### **Comments**

To the best of our knowledge and belief, the calculations were completed in accordance with the requirements of Minnesota Statutes, Section 356.215, and the requirements of the Standards for Actuarial Work established by the Legislative Commission on Pensions and Retirement.

This report should not be relied upon for any purpose other than the purpose described herein. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results. GRS is not responsible for the consequences of any unauthorized use.

The valuation was based upon information furnished by the Minnesota State Retirement System (MSRS), concerning benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries.

Actuarial assumptions, including discount rates, mortality tables and others identified in this report, are prescribed by Minnesota Statutes Section 356.215 the Legislative Commission on Pensions and Retirement (LCPR), and the Board of Directors. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the Actuarial Basis of the valuation report. MSRS is solely responsible for communicating to GRS any changes required thereto.

Guidance regarding the selection of economic assumptions for measuring pension obligations is provided by Actuarial Standards of Practice (ASOP) No. 27. A revision of ASOP No. 27, applicable to valuation dates on or after September 30, 2014, will guide assumption setting for future valuations. A recent review of inflation and investment return assumptions for accounting and financial reporting purposes developed a recommended range of 6.99% to 7.92% for the assumed investment return. Additional review and discussion will be required before the next valuation.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

### **Professional Qualifications**

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

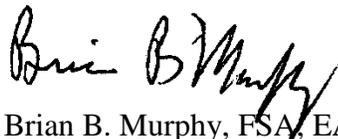
Bonita J. Wurst and Brian B. Murphy are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. In addition, Mr. Murphy meets the requirements of "approved actuary" under Minnesota Statutes Section 356.215, Subdivision 1, Paragraph (c).

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge and belief the information contained in this report is accurate and fairly presents the actuarial position of the Correctional Employees Retirement Fund as of the valuation date and was performed in accordance with the requirements of Minnesota Statutes Section 356.215, and the requirements of the Standards for Actuarial Work established by the LCPR. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Sincerely,



Bonita J. Wurst, ASA, EA, MAAA



Brian B. Murphy, FSA, EA, MAAA, FCA

BJW/BBM:sc  
Enclosures

# Exhibit A

## Correctional Employees Retirement Fund

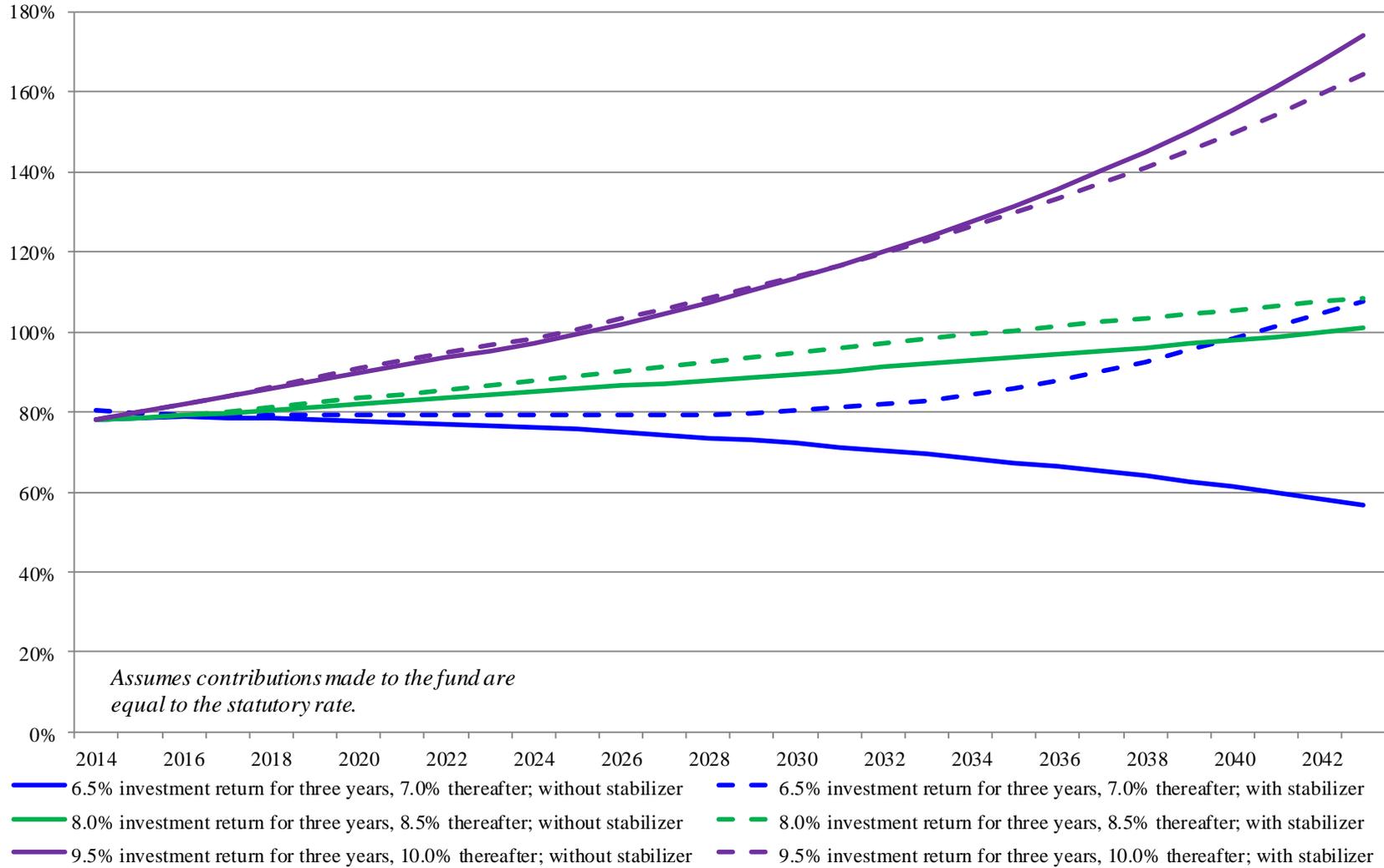
### Contribution Stabilizer

The following is a summary of Minnesota Statute 352.045:

- If a contribution sufficiency of at least 1.0% has existed for two consecutive years, member contributions are decreased by at most 0.25% and employer contributions are decreased by at most 0.375% to a level that is necessary to maintain a 1.0% sufficiency. A contribution rate decrease under this section must not be made until at least two years have passed since fully implementing a previous decrease.
- If a contribution deficiency of at least 0.5% has existed for two consecutive years, the member and employer contribution rates are increased as follows:
  - If the contribution deficiency is less than 2.0%, member contributions are increased 0.25% and employer contributions are increased by 0.375%.
  - If the contribution deficiency is greater than 1.99% and less than 4.01%, member contributions are increased 0.50% and employer contributions are increased by 0.75%.
  - If the contribution deficiency is greater than 4.0%, member contributions are increased by 0.75% and employer contributions are increased by 1.125%.

*This exhibit should only be viewed in conjunction with GRS' January 30, 2015 letter to MSRS.*

## Correctional Employees Retirement Fund Estimated Funded Ratio

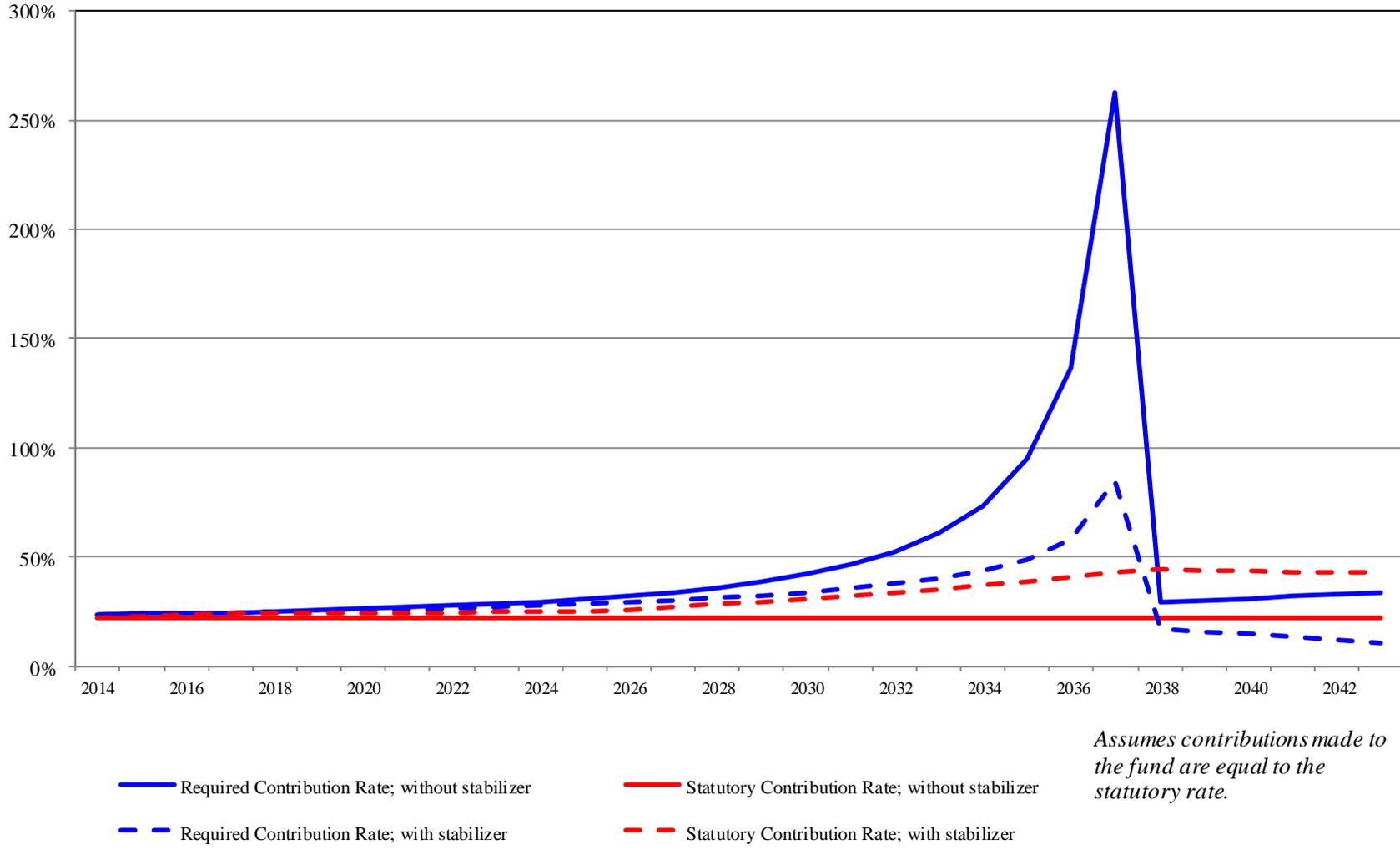


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## Correctional Employees Retirement Fund

### Estimated Required Contribution Rates

Investment return of 6.5% for three years; 7.0% thereafter

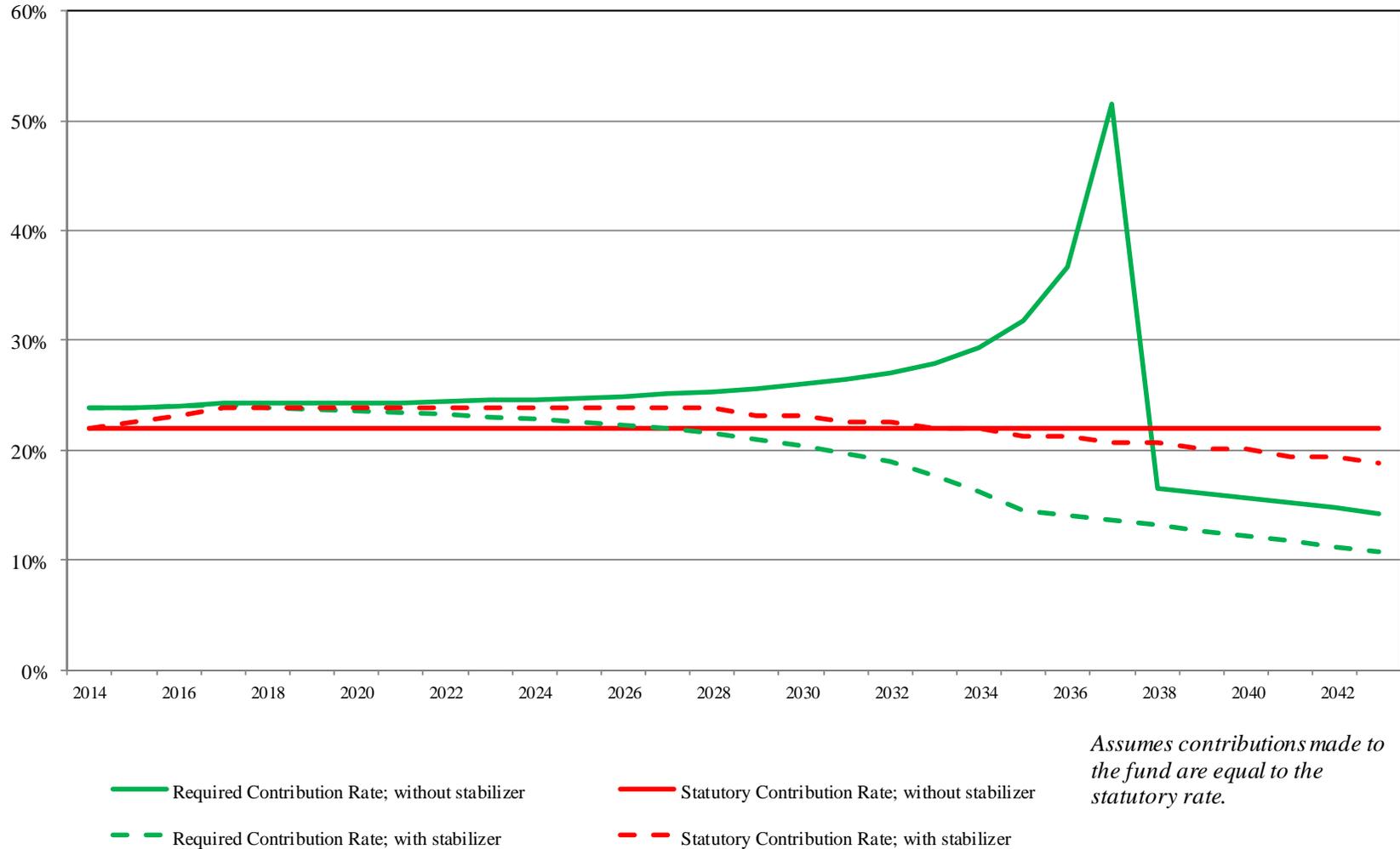


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## Correctional Employees Retirement Fund

### Estimated Required Contribution Rates

**Investment Return of 8.0% for three years; 8.5% thereafter**

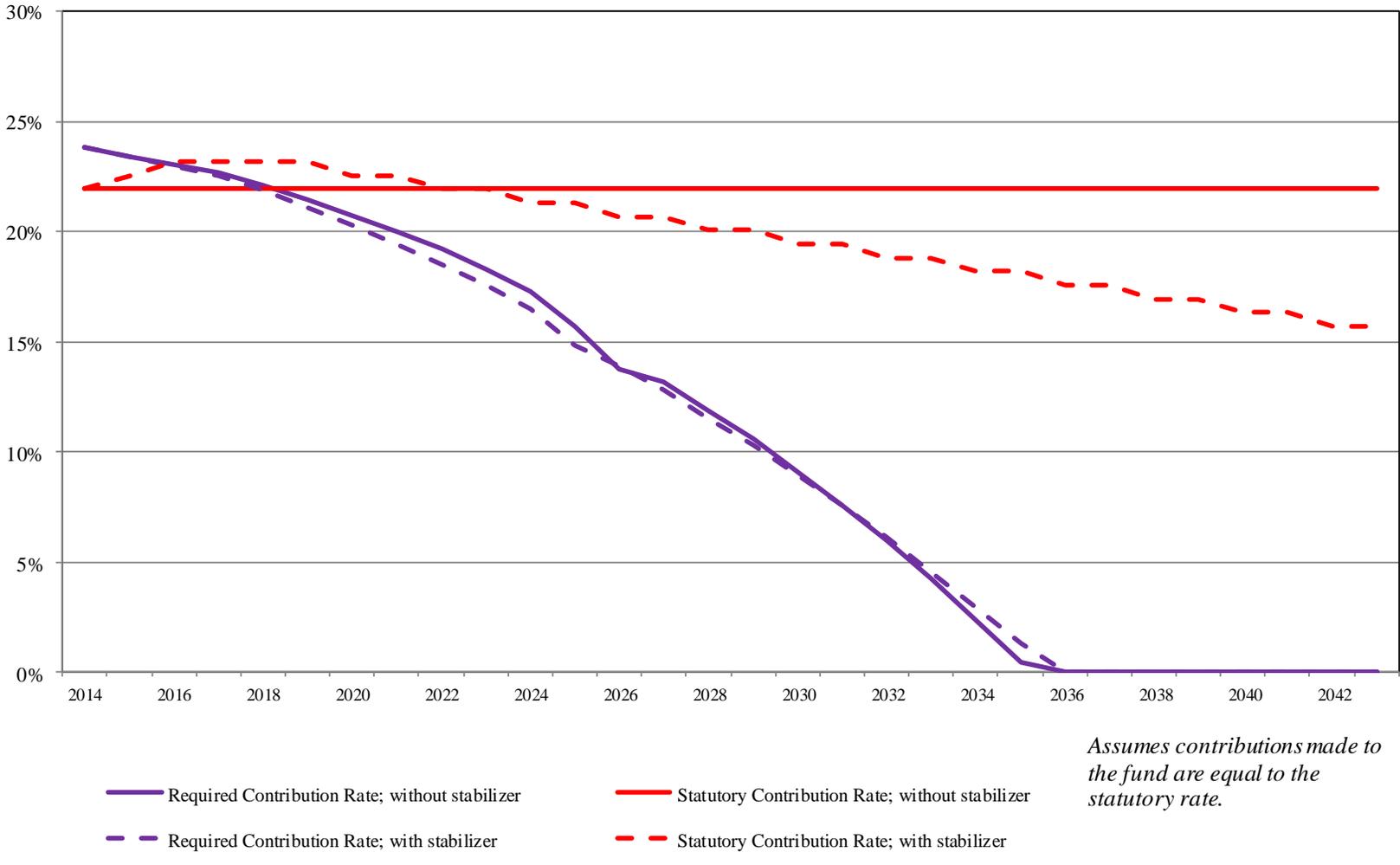


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## Correctional Employees Retirement Fund

### Estimated Required Contribution Rates

Investment Return of 9.5% for three years; 10.0% thereafter



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**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	23.8%	23.9%	24.0%	24.4%	24.9%	25.4%	26.0%	26.7%	27.5%	28.4%
Sufficiency / (Deficiency)	(1.9)%	(1.9)%	(2.1)%	(2.5)%	(3.0)%	(3.5)%	(4.1)%	(4.8)%	(5.6)%	(6.4)%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	51,358	52,908	54,427	56,022	57,696	59,380	61,220	63,085	65,122
Required - Chapter 356 (MVA)	54,050	55,839	57,880	60,596	63,560	66,828	70,453	74,505	79,059	84,224
Sufficiency / (Deficiency)	(4,221)	(4,481)	(4,972)	(6,169)	(7,538)	(9,132)	(11,073)	(13,285)	(15,974)	(19,102)
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	926,743	976,990	1,028,026	1,084,680	1,142,372	1,200,986	1,259,984	1,318,940	1,377,585
Actuarial Accrued Liability (AAL)	1,122,474	1,179,549	1,239,526	1,307,131	1,383,202	1,461,768	1,542,849	1,626,105	1,711,187	1,798,025
Unfunded AAL	245,418	252,806	262,536	279,105	298,522	319,396	341,863	366,121	392,247	420,440
Funding Ratio	78%	79%	79%	79%	78%	78%	78%	77%	77%	77%
<b>Benefit Payments</b>										
	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

*Numbers may not add due to rounding.*

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**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	29.4%	30.7%	32.1%	33.8%	36.0%	38.6%	42.1%	46.5%	52.5%	60.9%
Sufficiency / (Deficiency)	(7.5)%	(8.7)%	(10.2)%	(11.9)%	(14.0)%	(16.6)%	(20.1)%	(24.6)%	(30.6)%	(39.0)%
<b>Contributions</b>										
Statutory - Chapter 352	67,249	69,380	71,673	74,125	76,638	79,278	82,006	84,841	87,826	90,933
Required - Chapter 356 (MVA)	90,123	96,929	104,878	114,276	125,555	139,350	157,128	179,898	210,168	252,360
Sufficiency / (Deficiency)	(22,874)	(27,549)	(33,205)	(40,151)	(48,917)	(60,072)	(75,122)	(95,057)	(122,342)	(161,427)
<b>Funding Ratios</b>										
Current Assets (MVA)	1,435,927	1,494,050	1,551,751	1,608,643	1,664,842	1,720,521	1,775,444	1,829,541	1,882,532	1,934,259
Actuarial Accrued Liability (AAL)	1,886,707	1,977,506	2,070,455	2,165,292	2,262,317	2,361,948	2,464,146	2,569,102	2,676,801	2,787,342
Unfunded AAL	450,780	483,456	518,704	556,649	597,475	641,427	688,702	739,561	794,269	853,083
Funding Ratio	76%	76%	75%	74%	74%	73%	72%	71%	70%	69%
<b>Benefit Payments</b>										
	107,258	113,697	120,642	127,576	134,358	141,457	148,659	156,181	163,930	171,820

*Numbers may not add due to rounding.*

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**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	73.5%	94.6%	136.7%	263.0%	29.2%	30.0%	30.8%	31.8%	32.8%	33.8%
Sufficiency / (Deficiency)	(51.6)%	(72.7)%	(114.8)%	(241.0)%	(7.2)%	(8.0)%	(8.9)%	(9.8)%	(10.8)%	(11.9)%
<b>Contributions</b>										
Statutory - Chapter 352	94,150	97,453	100,922	104,599	108,412	112,358	116,510	120,828	125,318	130,002
Required - Chapter 356 (MVA)	315,384	420,009	628,644	1,253,040	144,030	153,423	163,680	174,850	187,054	200,428
Sufficiency / (Deficiency)	(221,234)	(322,556)	(527,722)	(1,148,441)	(35,618)	(41,065)	(47,170)	(54,022)	(61,736)	(70,426)
<b>Funding Ratios</b>										
Current Assets (MVA)	1,984,610	2,033,102	2,078,931	2,121,553	2,160,849	2,196,725	2,228,704	2,256,810	2,281,231	2,301,679
Actuarial Accrued Liability (AAL)	2,900,912	3,017,370	3,136,278	3,257,426	3,381,027	3,507,397	3,636,508	3,768,803	3,904,966	4,045,249
Unfunded AAL	916,302	984,268	1,057,347	1,135,873	1,220,178	1,310,672	1,407,804	1,511,993	1,623,735	1,743,570
Funding Ratio	68%	67%	66%	65%	64%	63%	61%	60%	58%	57%
<b>Benefit Payments</b>										
	180,192	189,302	198,920	208,641	218,363	228,445	238,442	248,161	258,078	268,161

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**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.6%	23.2%	23.8%	23.8%	23.8%	23.8%	23.8%	24.5%	25.1%
Required - Chapter 356 (MVA)	23.8%	23.9%	24.0%	24.3%	24.6%	25.0%	25.4%	25.8%	26.4%	26.9%
Sufficiency / (Deficiency)	(1.9)%	(1.3)%	(0.8)%	(0.5)%	(0.8)%	(1.1)%	(1.6)%	(2.0)%	(1.9)%	(1.9)%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	52,821	55,921	59,076	60,807	62,625	64,453	66,450	70,271	74,393
Required - Chapter 356 (MVA)	54,050	55,839	57,770	60,241	62,798	65,590	68,659	72,061	75,851	79,939
Sufficiency / (Deficiency)	(4,221)	(3,018)	(1,849)	(1,165)	(1,991)	(2,965)	(4,206)	(5,611)	(5,580)	(5,546)
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	926,743	978,500	1,032,745	1,094,541	1,157,877	1,222,676	1,288,443	1,354,804	1,423,396
Actuarial Accrued Liability (AAL)	1,122,474	1,179,549	1,239,526	1,307,131	1,383,202	1,461,768	1,542,849	1,626,105	1,711,187	1,798,025
Unfunded AAL	245,418	252,806	261,026	274,386	288,661	303,891	320,173	337,662	356,383	374,629
Funding Ratio	78%	79%	79%	79%	79%	79%	79%	79%	79%	79%
<b>Benefit Payments</b>										
	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

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**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	25.1%	25.1%	25.7%	27.0%	28.2%	29.5%	30.7%	32.0%	33.2%	35.1%
Required - Chapter 356 (MVA)	27.5%	28.3%	29.2%	30.1%	31.2%	32.3%	33.8%	35.5%	37.6%	40.2%
Sufficiency / (Deficiency)	(2.5)%	(3.2)%	(3.5)%	(3.2)%	(3.0)%	(2.9)%	(3.1)%	(3.6)%	(4.4)%	(5.1)%
<b>Contributions</b>										
Statutory - Chapter 352	76,823	79,257	83,918	91,010	98,460	106,366	114,697	123,494	132,840	145,306
Required - Chapter 356 (MVA)	84,365	89,399	95,199	101,716	108,859	116,793	126,278	137,208	150,231	166,408
Sufficiency / (Deficiency)	(7,542)	(10,142)	(11,281)	(10,706)	(10,399)	(10,427)	(11,581)	(13,714)	(17,391)	(21,102)
<b>Funding Ratios</b>										
Current Assets (MVA)	1,494,540	1,566,675	1,639,683	1,715,404	1,796,553	1,884,037	1,978,442	2,080,583	2,191,153	2,311,072
Actuarial Accrued Liability (AAL)	1,886,707	1,977,506	2,070,455	2,165,292	2,262,317	2,361,948	2,464,146	2,569,102	2,676,801	2,787,342
Unfunded AAL	392,167	410,831	430,772	449,888	465,764	477,911	485,704	488,519	485,648	476,270
Funding Ratio	79%	79%	79%	79%	79%	80%	80%	81%	82%	83%
<b>Benefit Payments</b>										
	107,258	113,697	120,642	127,576	134,358	141,457	148,659	156,181	163,930	171,820

*Numbers may not add due to rounding.*

*This exhibit should only be viewed in conjunction with GRS' January 30, 2015 letter to MSRS.*

**Correctional Employees Retirement Fund**  
**Scenario: 6.5% for Three Years, 7.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	37.0%	38.8%	40.7%	42.6%	44.5%	43.8%	43.8%	43.2%	43.2%	42.6%
Required - Chapter 356 (MVA)	43.6%	48.8%	58.3%	85.1%	17.0%	15.8%	14.5%	13.3%	12.0%	10.7%
Sufficiency / (Deficiency)	(6.7)%	(10.0)%	(17.6)%	(42.5)%	27.4%	28.0%	29.3%	29.9%	31.2%	31.9%
<b>Contributions</b>										
Statutory - Chapter 352	158,489	172,373	187,131	202,884	219,541	224,332	232,622	237,803	246,640	252,157
Required - Chapter 356 (MVA)	187,180	216,808	268,173	405,283	83,991	80,887	77,164	73,022	68,479	63,288
Sufficiency / (Deficiency)	(28,691)	(44,435)	(81,042)	(202,399)	135,550	143,445	155,458	164,781	178,161	188,869
<b>Funding Ratios</b>										
Current Assets (MVA)	2,444,076	2,591,322	2,753,769	2,932,856	3,130,668	3,349,450	3,578,013	3,820,746	4,075,712	4,347,342
Actuarial Accrued Liability (AAL)	2,900,912	3,017,370	3,136,278	3,257,426	3,381,027	3,507,397	3,636,508	3,768,803	3,904,966	4,045,249
Unfunded AAL	456,836	426,048	382,509	324,570	250,359	157,947	58,495	(51,943)	(170,746)	(302,093)
Funding Ratio	84%	86%	88%	90%	93%	95%	98%	101%	104%	107%
<b>Benefit Payments</b>										
	180,192	189,302	198,920	208,641	218,363	228,445	238,442	248,161	258,078	268,161

*Numbers may not add due to rounding.*

*This exhibit should only be viewed in conjunction with GRS' January 30, 2015 letter to MSRS.*

**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	23.8%	23.9%	24.0%	24.2%	24.2%	24.3%	24.3%	24.4%	24.4%	24.5%
Sufficiency / (Deficiency)	(1.9)%	(2.0)%	(2.1)%	(2.3)%	(2.3)%	(2.3)%	(2.4)%	(2.4)%	(2.5)%	(2.6)%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	51,358	52,908	54,427	56,022	57,696	59,380	61,220	63,085	65,122
Required - Chapter 356 (MVA)	54,050	55,952	57,943	60,068	61,845	63,743	65,730	67,909	70,203	72,726
Sufficiency / (Deficiency)	(4,221)	(4,594)	(5,035)	(5,641)	(5,823)	(6,047)	(6,350)	(6,689)	(7,118)	(7,604)
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	939,845	1,004,970	1,072,808	1,148,578	1,227,840	1,310,699	1,396,856	1,486,134	1,578,530
Actuarial Accrued Liability (AAL)	1,122,474	1,195,217	1,270,399	1,348,345	1,429,121	1,512,788	1,599,479	1,688,720	1,780,299	1,874,249
Unfunded AAL	245,418	255,372	265,429	275,537	280,543	284,948	288,780	291,864	294,165	295,719
Funding Ratio	78%	79%	79%	80%	80%	81%	82%	83%	83%	84%
<b>Benefit Payments</b>										
	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

*Numbers may not add due to rounding.*

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**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	24.6%	24.8%	24.9%	25.1%	25.4%	25.7%	26.0%	26.5%	27.1%	28.0%
Sufficiency / (Deficiency)	(2.7)%	(2.8)%	(3.0)%	(3.2)%	(3.4)%	(3.7)%	(4.1)%	(4.5)%	(5.2)%	(6.0)%
<b>Contributions</b>										
Statutory - Chapter 352	67,249	69,380	71,673	74,125	76,638	79,278	82,006	84,841	87,826	90,933
Required - Chapter 356 (MVA)	75,436	78,275	81,396	84,835	88,542	92,635	97,184	102,360	108,455	115,850
Sufficiency / (Deficiency)	(8,187)	(8,895)	(9,723)	(10,710)	(11,904)	(13,357)	(15,178)	(17,519)	(20,629)	(24,917)
<b>Funding Ratios</b>										
Current Assets (MVA)	1,674,340	1,773,960	1,877,524	1,985,008	2,096,920	2,213,857	2,336,046	2,463,917	2,597,730	2,737,906
Actuarial Accrued Liability (AAL)	1,970,715	2,069,978	2,172,100	2,276,921	2,384,747	2,496,045	2,610,837	2,729,386	2,851,764	2,977,907
Unfunded AAL	296,375	296,018	294,576	291,913	287,827	282,188	274,791	265,469	254,034	240,001
Funding Ratio	85%	86%	86%	87%	88%	89%	89%	90%	91%	92%
<b>Benefit Payments</b>										
	107,258	113,697	120,642	127,576	134,358	141,457	148,659	156,181	163,930	173,639

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**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	29.3%	31.8%	36.8%	51.6%	16.5%	16.1%	15.7%	15.2%	14.7%	14.3%
Sufficiency / (Deficiency)	(7.4)%	(9.9)%	(14.8)%	(29.7)%	5.5%	5.9%	6.3%	6.7%	7.2%	7.7%
<b>Contributions</b>										
Statutory - Chapter 352	94,150	97,453	100,922	104,599	108,412	112,358	116,510	120,828	125,318	130,002
Required - Chapter 356 (MVA)	125,834	141,211	168,986	245,890	81,416	82,401	83,238	83,844	84,180	84,438
Sufficiency / (Deficiency)	(31,684)	(43,758)	(68,064)	(141,291)	26,996	29,957	33,272	36,984	41,138	45,564
<b>Funding Ratios</b>										
Current Assets (MVA)	2,883,068	3,032,170	3,186,708	3,346,715	3,512,693	3,685,248	3,864,666	4,051,777	4,247,641	4,452,915
Actuarial Accrued Liability (AAL)	3,107,619	3,240,644	3,376,529	3,515,031	3,656,328	3,800,731	3,948,211	4,099,193	4,254,338	4,413,872
Unfunded AAL	224,551	208,474	189,821	168,316	143,635	115,483	83,545	47,416	6,697	(39,043)
Funding Ratio	93%	94%	94%	95%	96%	97%	98%	99%	100%	101%
<b>Benefit Payments</b>										
	184,867	195,066	205,840	216,784	227,767	239,144	250,486	261,603	272,974	284,568

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**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.6%	23.2%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%
Required - Chapter 356 (MVA)	23.8%	23.9%	24.0%	24.1%	23.9%	23.8%	23.6%	23.4%	23.3%	23.1%
Sufficiency / (Deficiency)	(1.9)%	(1.3)%	(0.8)%	(0.2)%	(0.1)%	0.1%	0.2%	0.4%	0.6%	0.8%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	52,821	55,921	59,076	60,807	62,625	64,453	66,450	68,474	70,685
Required - Chapter 356 (MVA)	54,050	55,952	57,833	59,709	61,069	62,475	63,881	65,373	66,848	68,394
Sufficiency / (Deficiency)	(4,221)	(3,131)	(1,912)	(633)	(262)	150	572	1,077	1,626	2,291
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	939,845	1,006,491	1,077,584	1,158,607	1,243,710	1,333,056	1,426,401	1,523,642	1,624,845
Actuarial Accrued Liability (AAL)	1,122,474	1,195,217	1,270,399	1,348,345	1,429,121	1,512,788	1,599,479	1,688,720	1,780,299	1,874,249
Unfunded AAL	245,418	255,372	263,908	270,761	270,514	269,078	266,423	262,319	256,657	249,404
Funding Ratio	78%	79%	79%	80%	81%	82%	83%	84%	86%	87%
<b>Benefit Payments</b>	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

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**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	23.8%	23.8%	23.8%	23.8%	23.8%	23.2%	23.2%	22.6%	22.6%	22.0%
Required - Chapter 356 (MVA)	22.8%	22.6%	22.3%	21.9%	21.5%	21.0%	20.4%	19.7%	18.9%	17.7%
Sufficiency / (Deficiency)	1.0%	1.3%	1.6%	1.9%	2.3%	2.2%	2.8%	2.9%	3.7%	4.2%
<b>Contributions</b>										
Statutory - Chapter 352	72,994	75,306	77,796	80,457	83,185	83,792	86,676	87,257	90,327	90,933
Required - Chapter 356 (MVA)	69,929	71,349	72,738	74,044	75,089	75,810	76,357	76,247	75,607	73,396
Sufficiency / (Deficiency)	3,065	3,957	5,058	6,413	8,096	7,982	10,319	11,010	14,720	17,537
<b>Funding Ratios</b>										
Current Assets (MVA)	1,730,391	1,840,763	1,956,184	2,076,737	2,203,047	2,335,829	2,473,093	2,617,481	2,766,865	2,924,025
Actuarial Accrued Liability (AAL)	1,970,715	2,069,978	2,172,100	2,276,921	2,384,747	2,496,045	2,610,837	2,729,386	2,851,764	2,977,907
Unfunded AAL	240,324	229,215	215,916	200,184	181,700	160,216	137,744	111,905	84,899	53,882
Funding Ratio	88%	89%	90%	91%	92%	94%	95%	96%	97%	98%
<b>Benefit Payments</b>										
	107,258	113,697	120,642	127,576	134,358	141,457	148,659	156,181	163,930	173,639

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**Correctional Employees Retirement Fund**  
**Scenario: 8.0% for Three Years, 8.5% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	21.3%	21.3%	20.7%	20.7%	20.1%	20.1%	19.5%	19.5%	18.8%
Required - Chapter 356 (MVA)	16.2%	14.6%	14.1%	13.6%	13.1%	12.7%	12.2%	11.7%	11.2%	10.7%
Sufficiency / (Deficiency)	5.8%	6.8%	7.2%	7.1%	7.6%	7.4%	7.9%	7.8%	8.2%	8.1%
<b>Contributions</b>										
Statutory - Chapter 352	94,150	94,678	98,048	98,642	102,239	102,760	106,557	107,066	111,045	111,494
Required - Chapter 356 (MVA)	69,488	64,665	64,805	64,843	64,887	64,748	64,655	64,358	64,066	63,568
Sufficiency / (Deficiency)	24,662	30,013	33,243	33,799	37,352	38,012	41,902	42,708	46,979	47,926
<b>Funding Ratios</b>										
Current Assets (MVA)	3,085,007	3,251,273	3,421,542	3,598,515	3,779,686	3,968,499	4,161,988	4,363,996	4,572,052	4,790,021
Actuarial Accrued Liability (AAL)	3,107,619	3,240,644	3,376,529	3,515,031	3,656,328	3,800,731	3,948,211	4,099,193	4,254,338	4,413,872
Unfunded AAL	22,612	(10,629)	(45,013)	(83,484)	(123,358)	(167,768)	(213,777)	(264,803)	(317,714)	(376,149)
Funding Ratio	99%	100%	101%	102%	103%	104%	105%	106%	107%	109%
<b>Benefit Payments</b>										
	184,867	195,066	205,840	216,784	227,767	239,144	250,486	261,603	272,974	284,568

*Numbers may not add due to rounding.*

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**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	23.8%	23.4%	23.0%	22.7%	22.1%	21.5%	20.8%	20.0%	19.2%	18.3%
Sufficiency / (Deficiency)	(1.9)%	(1.5)%	(1.1)%	(0.7)%	(0.2)%	0.5%	1.2%	1.9%	2.8%	3.7%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	51,358	52,908	54,427	56,022	57,696	59,380	61,220	63,085	65,122
Required - Chapter 356 (MVA)	54,050	54,793	55,518	56,242	56,397	56,398	56,205	55,811	55,186	54,277
Sufficiency / (Deficiency)	(4,221)	(3,435)	(2,610)	(1,815)	(375)	1,298	3,175	5,409	7,899	10,845
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	952,948	1,033,342	1,118,860	1,215,216	1,318,238	1,428,400	1,545,806	1,670,720	1,803,623
Actuarial Accrued Liability (AAL)	1,122,474	1,189,637	1,260,818	1,336,258	1,416,212	1,500,950	1,590,759	1,685,941	1,786,818	1,893,731
Unfunded AAL	245,418	236,689	227,476	217,398	200,996	182,712	162,359	140,135	116,098	90,108
Funding Ratio	78%	80%	82%	84%	86%	88%	90%	92%	94%	95%
<b>Benefit Payments</b>										
	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

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**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	17.3%	15.7%	13.8%	13.2%	11.9%	10.6%	9.1%	7.6%	6.0%	4.2%
Sufficiency / (Deficiency)	4.7%	6.3%	8.2%	8.8%	10.0%	11.4%	12.8%	14.4%	16.0%	17.7%
<b>Contributions</b>										
Statutory - Chapter 352	67,249	69,380	71,673	74,125	76,638	79,278	82,006	84,841	87,826	90,933
Required - Chapter 356 (MVA)	52,981	49,589	44,973	44,545	41,610	38,150	34,070	29,320	23,858	17,569
Sufficiency / (Deficiency)	14,268	19,791	26,700	29,580	35,028	41,128	47,936	55,521	63,968	73,364
<b>Funding Ratios</b>										
Current Assets (MVA)	1,945,344	2,095,919	2,256,219	2,426,679	2,608,710	2,803,618	3,012,605	3,236,731	3,477,450	3,736,408
Actuarial Accrued Liability (AAL)	2,007,042	2,109,763	2,214,900	2,322,024	2,431,681	2,544,277	2,659,917	2,778,575	2,900,446	3,025,735
Unfunded AAL	61,698	13,844	(41,319)	(104,655)	(177,029)	(259,341)	(352,688)	(458,156)	(577,004)	(710,673)
Funding Ratio	97%	99%	102%	105%	107%	110%	113%	116%	120%	123%
<b>Benefit Payments</b>										
	108,166	115,344	123,196	130,828	138,378	146,134	154,310	162,646	171,146	179,818

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**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITHOUT CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Required - Chapter 356 (MVA)	2.4%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sufficiency / (Deficiency)	19.5%	21.5%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
<b>Contributions</b>										
Statutory - Chapter 352	94,150	97,453	100,922	104,599	108,412	112,358	116,510	120,828	125,318	130,002
Required - Chapter 356 (MVA)	10,358	2,106	-	-	-	-	-	-	-	-
Sufficiency / (Deficiency)	83,792	95,347	100,922	104,599	108,412	112,358	116,510	120,828	125,318	130,002
<b>Funding Ratios</b>										
Current Assets (MVA)	4,015,371	4,315,786	4,638,987	4,986,932	5,362,036	5,767,050	6,204,664	6,678,405	7,192,367	7,750,499
Actuarial Accrued Liability (AAL)	3,154,661	3,286,970	3,422,137	3,560,038	3,700,770	3,844,587	3,991,441	4,141,785	4,296,377	4,455,475
Unfunded AAL	(860,710)	(1,028,816)	(1,216,850)	(1,426,894)	(1,661,266)	(1,922,463)	(2,213,223)	(2,536,620)	(2,895,990)	(3,295,024)
Funding Ratio	127%	131%	136%	140%	145%	150%	155%	161%	167%	174%
<b>Benefit Payments</b>										
	189,127	199,293	209,928	220,826	231,824	243,239	254,602	265,673	276,981	288,501

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**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	22.0%	22.6%	23.2%	23.2%	23.2%	23.2%	22.6%	22.6%	22.0%	22.0%
Required - Chapter 356 (MVA)	23.8%	23.4%	23.0%	22.6%	21.9%	21.1%	20.3%	19.5%	18.5%	17.6%
Sufficiency / (Deficiency)	(1.9)%	(0.8)%	0.2%	0.7%	1.3%	2.1%	2.3%	3.1%	3.4%	4.4%
<b>Contributions</b>										
Statutory - Chapter 352	49,829	52,805	55,865	57,483	59,083	60,806	60,927	62,744	62,872	64,780
Required - Chapter 356 (MVA)	54,050	54,793	55,407	55,884	55,743	55,397	54,796	54,061	53,037	51,825
Sufficiency / (Deficiency)	(4,221)	(1,988)	458	1,599	3,340	5,409	6,131	8,683	9,835	12,955
<b>Funding Ratios</b>										
Current Assets (MVA)	877,056	952,948	1,034,858	1,123,618	1,223,660	1,330,743	1,445,422	1,566,156	1,694,708	1,829,789
Actuarial Accrued Liability (AAL)	1,122,474	1,189,637	1,260,818	1,336,258	1,416,212	1,500,950	1,590,759	1,685,941	1,786,818	1,893,731
Unfunded AAL	245,418	236,689	225,960	212,640	192,552	170,207	145,337	119,785	92,110	63,942
Funding Ratio	78%	80%	82%	84%	86%	89%	91%	93%	95%	97%
<b>Benefit Payments</b>										
	56,216	60,309	64,237	68,449	72,849	77,512	82,765	88,610	94,736	101,003

*Numbers may not add due to rounding.*

*This exhibit should only be viewed in conjunction with GRS' January 30, 2015 letter to MSRS.*

**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	21.3%	21.3%	20.7%	20.7%	20.1%	20.1%	19.5%	19.5%	18.8%	18.8%
Required - Chapter 356 (MVA)	16.5%	14.8%	13.9%	12.8%	11.6%	10.3%	9.0%	7.6%	6.1%	4.6%
Sufficiency / (Deficiency)	4.9%	6.5%	6.8%	7.9%	8.5%	9.8%	10.5%	11.9%	12.7%	14.3%
<b>Contributions</b>										
Statutory - Chapter 352	64,924	67,025	67,124	69,316	69,499	71,835	71,974	74,430	74,543	77,150
Required - Chapter 356 (MVA)	50,183	46,593	45,145	42,840	40,046	36,893	33,171	28,982	24,163	18,768
Sufficiency / (Deficiency)	14,741	20,432	21,979	26,476	29,453	34,942	38,803	45,448	50,380	58,382
<b>Funding Ratios</b>										
Current Assets (MVA)	1,973,773	2,124,756	2,285,473	2,454,089	2,633,820	2,823,753	3,026,949	3,241,987	3,472,312	3,716,823
Actuarial Accrued Liability (AAL)	2,007,042	2,109,763	2,214,900	2,322,024	2,431,681	2,544,277	2,659,917	2,778,575	2,900,446	3,025,735
Unfunded AAL	33,269	(14,993)	(70,573)	(132,065)	(202,139)	(279,476)	(367,032)	(463,412)	(571,866)	(691,088)
Funding Ratio	98%	101%	103%	106%	108%	111%	114%	117%	120%	123%
<b>Benefit Payments</b>										
	108,166	115,344	123,196	130,828	138,378	146,134	154,310	162,646	171,146	179,818

*Numbers may not add due to rounding.*

*This exhibit should only be viewed in conjunction with GRS' January 30, 2015 letter to MSRS.*

**Correctional Employees Retirement Fund**  
**Scenario: 9.5% for Three Years, 10.0% thereafter WITH CONTRIBUTION STABILIZER**  
**Fiscal year beginning July 1**

<b>\$ in Thousands</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>
<b>Contributions (% of Payroll)</b>										
Statutory - Chapter 352	18.2%	18.2%	17.6%	17.6%	17.0%	17.0%	16.3%	16.3%	15.7%	15.7%
Required - Chapter 356 (MVA)	3.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sufficiency / (Deficiency)	15.2%	16.9%	17.6%	17.6%	17.0%	17.0%	16.3%	16.3%	15.7%	15.7%
<b>Contributions</b>										
Statutory - Chapter 352	77,235	79,975	79,951	82,822	82,758	85,770	85,613	88,762	88,530	91,826
Required - Chapter 356 (MVA)	12,572	5,642	-	-	-	-	-	-	-	-
Sufficiency / (Deficiency)	64,663	74,333	79,951	82,822	82,758	85,770	85,613	88,762	88,530	91,826
<b>Funding Ratios</b>										
Current Assets (MVA)	3,979,369	4,258,439	4,557,568	4,875,368	5,216,466	5,580,005	5,971,015	6,388,971	6,840,341	7,324,667
Actuarial Accrued Liability (AAL)	3,154,661	3,286,970	3,422,137	3,560,038	3,700,770	3,844,587	3,991,441	4,141,785	4,296,377	4,455,475
Unfunded AAL	(824,708)	(971,469)	(1,135,431)	(1,315,330)	(1,515,696)	(1,735,418)	(1,979,574)	(2,247,186)	(2,543,964)	(2,869,192)
Funding Ratio	126%	130%	133%	137%	141%	145%	150%	154%	159%	164%
<b>Benefit Payments</b>										
	189,127	199,293	209,928	220,826	231,824	243,239	254,602	265,673	276,981	288,501

*Numbers may not add due to rounding.*